

## APPENDIX A

Marked-up versions of the claimed amended by the Response filed October 7, 2002, are presented below.

### In the specification:

At page 13, replace the paragraph beginning at line 31 with the following paragraph:

--Fig. 11 illustrates a print cartridge 28 sealed with a block coated hot-melt 55 [28] on heat stakable pouch material 53. The block coating is a pattern of hot-melt coated onto a base film before the nozzle sealing process is commenced. The clock coating is a strip of hot-melt sufficiently wide to cover the width of the orifice plate 29, Fig. 6. The base film is a heat stakable pouch material. The pouch material and the hot-melt are chosen for their moisture retardance (preferably impermeability) as well as conformability to any gross topography on the print cartridge. The hot-melt is heat staked to the print cartridge 28 in the same manner as described above in connection with Figs. 3 and 4. After sealing the orifice plate 29, Fig. 6, and the TAB circuit 32, the pouch material 53 is flow wrapped around the print cartridge 28 into a pouch and heat staked. Later, when the print cartridge is to be installed in a printer, the pouch material 53 is removed from around the print cartridge 28. This removal of the pouch material also pulls the block coated hot-melt off of the orifice plate because the hot-melt does not separate from the pouch material. This construction allows for all-in-one, simultaneous pouch and nozzle seal removal.--

### In the claims:

6. (Amended) A print cartridge with sealed nozzles, comprising:  
a print cartridge having nozzles through which ink is jetted; and  
a hot-melt layer adhesively bonded to the print cartridge and sealing the nozzles,  
wherein the hot-melt layer bonds the print cartridge to a package containing the print cartridge.

8. (Amended) A print cartridge with sealed nozzles, comprising:  
a print cartridge having nozzles through which ink is jetted; and

a hot-melt layer adhesively bonded to the print cartridge and sealing the nozzles,

[The print cartridge of claim 6] wherein the print cartridge has electrical contacts and leads mounted thereon which are also sealed by the hot-melt.

9. (Amended) A print cartridge with sealed nozzles, comprising:

a print cartridge having nozzles through which ink is jetted; and

a hot-melt layer adhesively bonded to the print cartridge and sealing the nozzles,

[The print cartridge of claim 6] wherein the hot-melt is adhesively bonded to a film having an adhesion with the hot-melt that is greater than the adhesion between the hot-melt and the print cartridge.

10. (Amended) A print cartridge with sealed nozzles, comprising:

a print cartridge having nozzles through which ink is jetted; and

a hot-melt layer adhesively bonded to the print cartridge and sealing the nozzles,

[The print cartridge of claim 6] wherein the hot-melt layer is laminated with a moisture retardant base film.

APPENDIX B

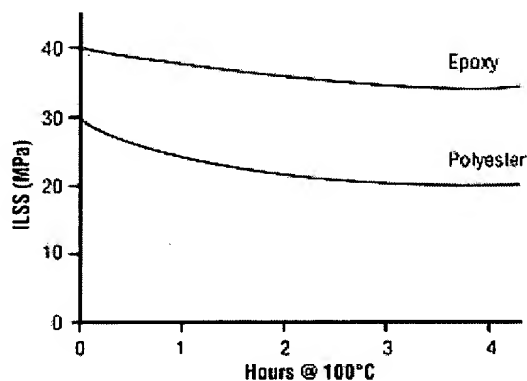
[Home](#)[About Us](#)[Guide To Composites](#)[Newsroom](#)[Online Stores](#)[Essential Info](#)[Career Centre](#)

## Guide To Composites

[Introduction](#)[Resin Systems](#)[Resin Types](#)[Polyester Resins](#)[Vinylester Resins](#)[Epoxy Resins](#)[Gelation, Curing and Post-Curing](#)[Adhesive Properties](#)[Mechanical Properties](#)[Micro-Cracking](#)[Fatigue Resistance](#)[Degradation from Water Ingress](#)[Osmosis](#)[Resin Comparison Summary](#)[Other Resin Systems used in Composites](#)[Release Agents](#)[Gelcoats and Barrier Layers](#)[Reinforcements](#)[Core Materials](#)[Manufacturing Processes](#)[Composite Damage Repair](#)[Laminate Formulae](#)

## Degradation from Water Ingress

An important property of any resin, particularly in a marine environment, is its ability to withstand degradation from water ingress. All resins will absorb some moisture, adding to a laminate's weight, but what is more significant is how the absorbed water affects the resin and resin/fibre bond in a laminate, leading to a gradual and long-term loss in mechanical properties. Both polyester and vinylester resins are prone to water degradation due to the presence of hydrolysable ester groups in their molecular structures. As a result, a thin polyester laminate can be expected to retain only 65% of its inter-laminar shear strength after immersion in water for a period of one year, whereas an epoxy laminate immersed for the same period will retain around 90%.



The figure above demonstrates the effects of water on an epoxy and polyester woven glass laminate, which have been subjected to a water soak at 100°C. This elevated temperature soaking gives accelerated degradation properties for the immersed laminate.

Published courtesy of David Cripps, SP Systems  
<http://www.spsystems.com>



SP Systems

## Search Site

[Register for free industry newsletter](#)[Recommend this site](#)[Link to us](#)[Contact us](#)

## Related Publications

**Analysis for Design of Vessels and Piping**  
[VIEW DETAILS](#)

**Advanced Materials for Composites and Thermoplastics**  
[VIEW DETAILS](#)

[NEXT PAGE](#)[PREVIOUS PAGE](#)
[home](#) [about us](#) [composites guide](#) [news](#) [online store](#) [essential info](#) [career centre](#) [forums](#)